

Abstract of the Disclosure

A field emission device using carbon nanotubes (CNTs) is provided. The field emission device includes a cathode on which a plurality of CNT emitters are arranged, a gate insulating layer having a through hole through which electrons emitted from the CNT emitters pass, and a gate electrode which corresponds to the through hole of the gate insulating layer and has an elongated gate hole that forms an electric field having different strengths in a first direction and in a second direction orthogonal to the first direction.